

Title (en)

SYMMETRIC DUAL PIEZOELECTRIC STACK MICROELECTROMECHANICAL PIEZOELECTRIC DEVICES

Title (de)

MIKROELEKTROMECHANISCHE PIEZOELEKTRISCHE VORRICHTUNGEN MIT SYMMETRISCHEM DUALEM PIEZOELEKTRISCHEM STAPEL

Title (fr)

DISPOSITIFS PIÉZO-ÉLECTRIQUES MICRO-ÉLECTROMÉCANIQUES À DEUX EMPILEMENTS PIÉZOÉLECTRIQUES SYMÉTRIQUES

Publication

EP 3114714 A1 20170111 (EN)

Application

EP 14884536 A 20140424

Priority

- US 201414201293 A 20140307
- US 2014035318 W 20140424

Abstract (en)

[origin: US2015256144A1] The present invention relates to a device comprising an elongate resonator beam extending between first and second ends. A base is connected to the resonator beam at the first end with the second end extending from the base as a structural layer. The elongate resonator beam comprises either: (1) a first oxide layer on a first piezoelectric stack layer over a structural layer on a second oxide layer over a second piezoelectric stack layer on a third oxide layer or (2) a first oxide layer on a first piezoelectric stack layer over a second oxide layer on a structural layer over a third oxide layer on a second piezoelectric stack over a fourth oxide layer. Also disclosed is a system comprising an apparatus and the device, as well as methods of making and using the device.

IPC 8 full level

H01L 41/00 (2013.01)

CPC (source: EP KR US)

H03H 3/0072 (2013.01 - EP KR US); **H03H 9/2457** (2013.01 - EP KR US); **H10N 30/01** (2023.02 - EP US); **H10N 30/20** (2023.02 - KR US); **H10N 30/2041** (2023.02 - EP KR US); **H10N 30/304** (2023.02 - EP KR US); **H10N 30/50** (2023.02 - KR US); **H10N 30/708** (2024.05 - KR); **H10N 30/708** (2024.05 - EP US)

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

US 2015256144 A1 20150910; **US 9502635 B2 20161122**; CA 2939084 A1 20150911; EP 3114714 A1 20170111; JP 2017510999 A 20170413; KR 20160130381 A 20161111; WO 2015134049 A1 20150911

DOCDB simple family (application)

US 201414201293 A 20140307; CA 2939084 A 20140424; EP 14884536 A 20140424; JP 2016573459 A 20140424; KR 20167023743 A 20140424; US 2014035318 W 20140424